Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

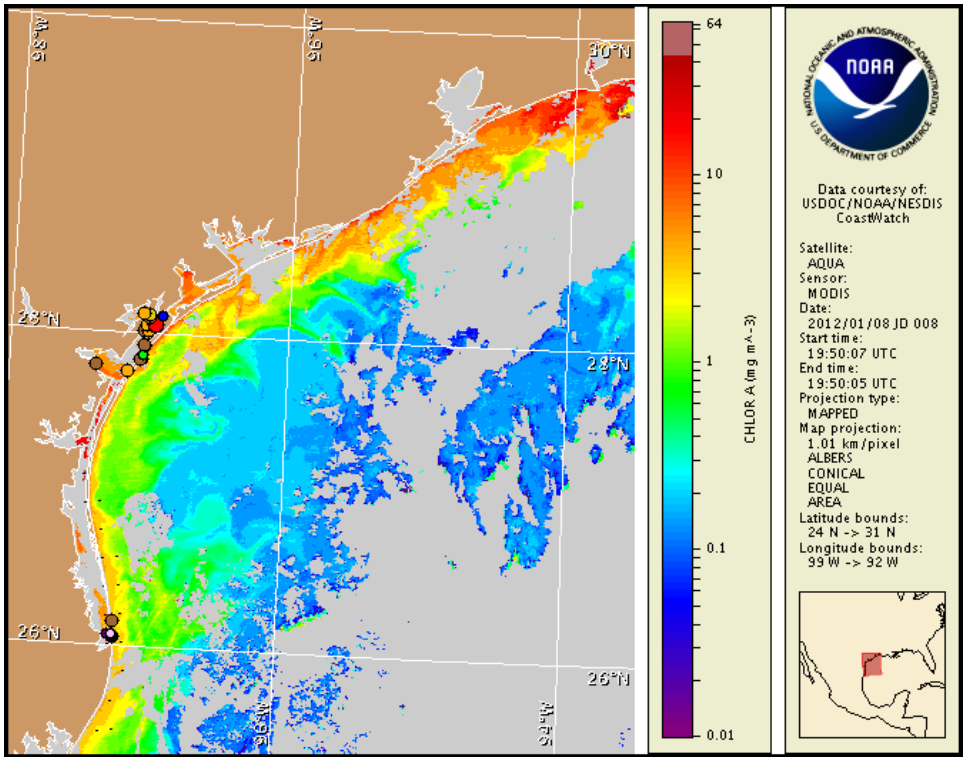
Monday, 09 January 2012

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, January 5, 2012



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 30 to January 6 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive: http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

A patchy harmful algal bloom is present along the Texas coast. Patchy high impacts are possible today in the Port Aransas/Corpus Christi Bay area, with patchy low impacts Tuesday and Wednesday. Patchy low impacts are possible today and Wednesday alongshore the South Padre Island region, with patchy very low impacts on Tuesday. Patchy low impacts are possible today through Wednesday within the lower Laguna Madre. Water samples last identified harmful algal blooms in the Galveston Bay area on December 28, in the Matagorda Bay area on December 14, and alongshore the Padre Island National Seashore region on November 28. Associated respiratory impacts remain possible in these areas. No additional impacts are expected at the coast in Texas today through Wednesday, January 11. Late last week, reports of respiratory irritation, discolored water, and dead fish were received from the Port Aransas/Corpus Christi Bay area. All Texas bays and coastal waters remain closed to commercial and recreational oyster harvesting due to blooms of the harmful algae Karenia brevis (red tide).

Analysis

A harmful algal bloom continues along much of the Texas coastline, but samples and satellite imagery indicate that *Karenia brevis* concentrations are dissipating in some regions.

No new samples have been received from the Galveston or Matagorda Bay regions. The most recent samples identified 'not present' to 'low b' *K. brevis* concentrations in the Galveston Bay region (12/27-28; TPWD), and 'not present' to 'high' concentrations in the Matagorda Bay region (12/5-14; TPWD).

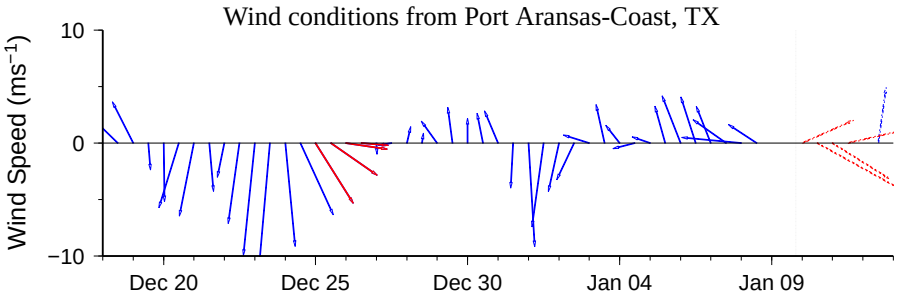
In the Port Aransas region, samples indicate that *K. brevis* concentrations range from 'not present' to 'high' (1/4-1/5; TPWD). In the Copano Bay area, samples range from 'low a' to 'medium' *K. brevis* concentrations (1/4; TPWD). Within Aransas Bay, 'medium' to 'high' concentrations were identified from samples collected from ARA 7 at Long Reef, Fulton Harbor, offshore Key Allegro, and ARA 11 at ICCW #49, with 'low a' concentrations identified within Rockport Harbor and at ARA 13 at Long Reef/St. Jose Island (1/4; TPWD). 'Very low b' concentrations were identified in northern Aransas Bay near Dunham Bay and in southern Aransas Bay from ARA 19 inside Mud Island (1/4; TPWD). In the Port Aransas area, 'very low a' and 'low a' concentrations were identified from the UT Pier and Port Aransas Marina launch, respectively; *K. brevis* was 'not present' in samples collected from the lighthouse within the Lydia Ann Channel (1/4; TPWD). Within Corpus Christi Bay, samples indicate 'medium' *K. brevis* concentrations at COR 19 at Shamrock Cove and 'low a' concentrations near the boat launch in Corpus Christi Marina (1/4; TPWD). Respiratory irritation, discolored water, and dead fish have been reported from near the Copano Creek discharge area; dead fish have also been reported from Nueces Bay (1/6; TPWD).

No samples have been received from alongshore Padre Island National Seashore since 'medium' to 'high' *K. brevis* concentrations were identified on 11/28 (TPWD). The most recent samples received from alongshore the South Padre Island region and within the lower Laguna Madre identified 'background' to 'low a' *K. brevis* concentrations (1/3-5; TPWD).

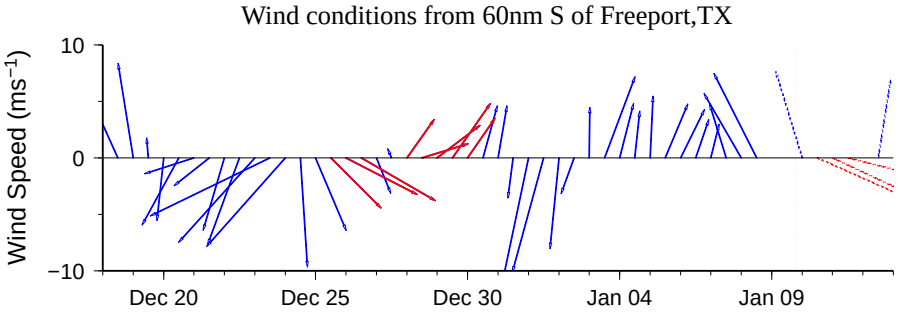
Recent MODIS imagery (1/8; page 1) is partially obscured by clouds along the Texas coastline from the Galveston to Matagorda Bay areas, limiting analysis. Elevated chlorophyll (2 to <10 μg/L) is visible stretching along- and offshore from Sabine Pass to south of the Rio Grande, with patches of high chlorophyll (10 to 16 μg/L) present along- and offshore the Sabine Pass region, alongshore the Freeport region, and alongshore the Matagorda/San Jose Island region. Elevated chlorophyll at the coast is not necessarily indicative of the bloom's extent and may be due to the continued resuspension of benthic chlorophyll and sediments; in-situ sampling is required to confirm the presence of *K. brevis*.

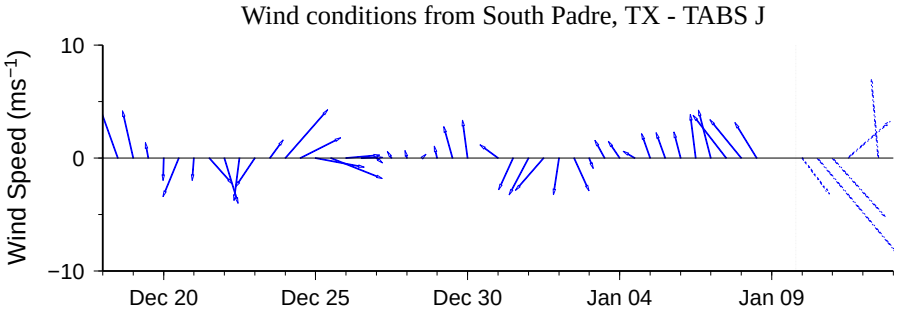
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 15km north from the Galveston Bay region, <10km south (negligible) from both the Matagorda Peninsula and Port Aransas regions, 25km south along the Padre Island National Seashore region, and 70km south from Brazos Santiago Pass from January 8 to 12. Forecasted onshore winds will increase the potential for impacts along the Texas coast today and Wednesday.

Kavanaugh, Derner



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



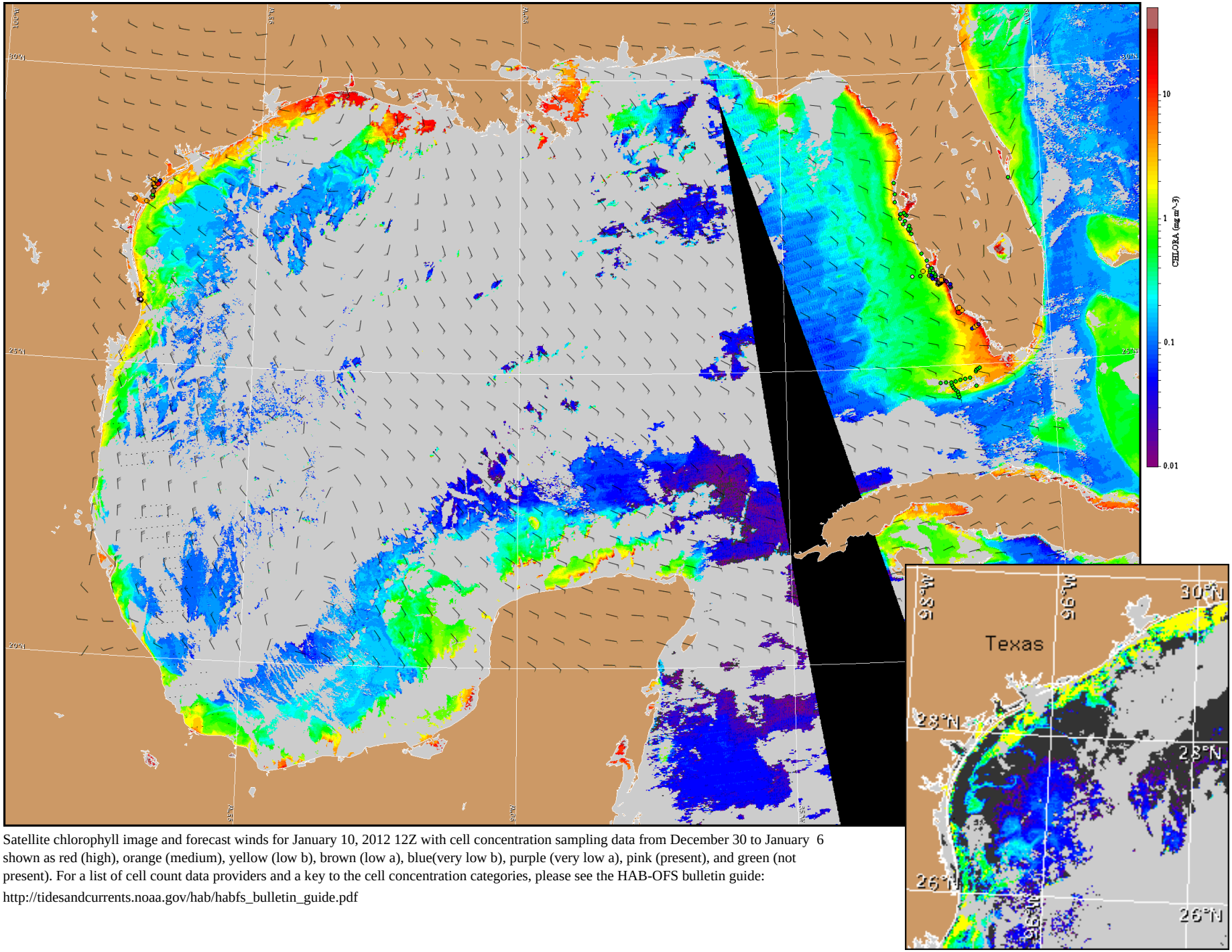


Wind Analysis

Galveston/Freeport: Southeast winds (15 kn, 8 m/s) today becoming south to southwest winds (10-15 kn, 5-8 m/s) this afternoon through evening. West to northwest winds (15-20 kn, 8-10 m/s) Tuesday. West to southwest winds (10-15 kn) Wednesday.

Port Aransas: South winds (10-20 kn, 5-10 m/s) today becoming west to northwest winds (10-25 kn, 5-13 m/s) this afternoon through Wednesday. Southwest winds (5-10 kn, 3-5 m/s) Wednesday afternoon through evening.

South Padre: South winds (10-15 kn) today becoming west winds (20 kn, 10 m/s) this afternoon. Northwest winds (15-25 kn, 8-13 m/s) tonight through Tuesday. South winds (15 kn, 8 m/s) Wednesday.



Satellite chlorophyll image and forecast winds for January 10, 2012 12Z with cell concentration sampling data from December 30 to January 6 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide: http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).